REMARKS

In the following, the Examiner's comments are included in bold, indented type, followed by the Applicants' remarks:

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> **The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.**

Claims 4-5, 11-12, 16-17, 23-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 4-5, 16-17, 23-24 recite determining if inserts and update that result in modification of the DCR are rare (or rarely concurrent with queries) is indefinite. It is unclear what would be considered rare or rarely concurrent.

Claims 11 recite determining that inserts and updates that result in modification of the DCR are frequent. It is unclear what would be considered frequent.

Claim 12 recite determining that inserts and updates that result in modification of the DCR are frequently concurrent with queries. It is unclear what would be considered frequently concurrent.

Applicants respectfully disagree that use of relative timing terms such as "frequent" and "frequently" is inherently indefinite. Such terms have been used in claims whose scope has been successfully assessed by courts – including the Supreme Court. For example, the Court of Customs and Patents Appeals was able to assess a method claim that included steps performed at "frequent intervals" without difficulty, reversing the Board of Appeals' rejection, and the Supreme Court was able to affirm that ruling on appeal. *In re Diehr*, 602 F.2d 982, 203 U.S.P.Q. 44 (CCPA 1979), *aff'd Diamond v. Diehr*, 450 U.S. 175 (1981). *See also In re Deutsch*, 553 F.2d 689, 690, 193 U.S.P.Q. 634 (CCPA 1977) (reversing boards' rejection of a method claim that used both "periodically" and "frequent intervals" to describe the timing of the steps). The

courts' ability to determine the bounds of claims that utilize relative timing terms indicates that such terms are not inherently indefinite. There is no reason that such terms are any less definite in this case than they were in *Diehr* or *Deutsch*. Applicants respectfully request withdrawal of examiners' rejection under 35 U.S.C. § 112.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> **A person shall be entitled to a patent unless —**
>
> **(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.**

Claims 6, 18-19 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent Number 6,957,225 issued to Mohamed Zait et al ("Zait").

For each of claims 6, 18 and 19, the examiner asserts that the use of a correlation table in Zait is the claimed application of a derived constraint rule. Applicants respectfully disagree. In fact, Zait uses the old approach of correlating columns by joining the tables, rather than employing a derived constraint rule.

Zait's correlation method is discussed specifically in the paragraph at column 14, lines 19-32. Zait first creates a correlation table that includes the values from both columns, order_date and shipment_date. Col. 14, lines 19-20. Then Zait identifies those rows in the correlation table that have a value in the order_date column that matches the query range. Col. 14, lines 20-23. Finally, Zait merely reads the values for the shipment_date column in the identified rows. Col. 14, lines 23-27. In other words, there is no restriction whatsoever on the value relationship between the order_date value and the shipment_date value. The examiner asserts that the values of C1 and C2 would be 1 and 30, respectively, but Zait teaches no such constraint on the relationship between the order_date and the shipment_date values. Zait's approach will use the shipment_date values to prune partitions from the query execution plan with no regard to whether those values are within some range of the order_date value for the

same row of the correlation table. Zait does not teach any constraint between the values of the two columns it is correlating, let alone apply a derived constraint rule. An anticipation rejection is improper if the reference does not teach every aspect of the claimed invention. M.P.E.P. § 706.02.IV and *In re Paulsen*, 30 F.3d 1475, 1479 (Fed. Cir. 1994). Applicants respectfully request withdrawal of the anticipation rejection.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> **(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.**

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-5, 7-17, 20-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Number 6,957,225 issued to Mohamed Zait et al ("Zait") and US Patent Number 5,956,704 issued to Jyotin Gautam et al ("Gautam").

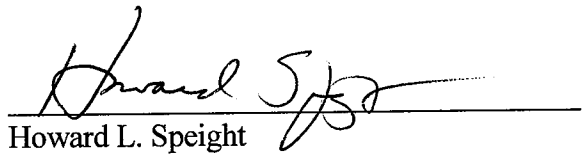
As discussed with respect to the anticipation rejection, Zait teaches a correlation method with which there is no constraint on the relationships between the correlated columns. Gautam does not address this deficiency because Gautam never discusses using check constraints that are based on a relationship between values of different columns such as the derived constraint rule. Each of the independent claims includes use of the derived constraint rule, which is not taught by the cited prior art. Claims 1-5, 7-17, and 20-26 would not have been obvious because there is no

prima facie case of obviousness where the asserted combination lacks at least one element. M.P.E.P. § 2143; *In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438, 1443 (Fed. Cir. 1991). Applicants respectfully request withdrawal of the obviousness rejection.

SUMMARY

Applicants contend that the claims are in condition for allowance, which action is requested. Applicants do not believe that any fees are required for this response. Should any additional fees be required, Applicant requests that the fees be debited from NCR Deposit Account Number **14-0225** Order Number **069092.0204**.

Respectfully submitted,



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